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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,568	03/11/2004	Patricia Vreugdewater	081468-0308406	4810
909	7590	10/19/2005	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP				KIM, PETER B
P.O. BOX 10500				ART UNIT
MCLEAN, VA 22102				PAPER NUMBER
				2851

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

10/797,568

**Applicant(s)**

VREUGDEWATER ET AL.

**Examiner**

Peter B. Kim

**Art Unit**

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 31 August 2005.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-19 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-19 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

Applicant's arguments filed on Aug. 31, 2005 have been fully considered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 10 and 11, it is not clear how the separation layers and the cooling element are in substantial thermal contact and independent at the same time.

The remaining claims, not specifically mentioned, are rejected for incorporating the defects from the base claim by dependency.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 2, 5, 7-12, 15, and 17-19 are rejected under 35 U.S.C. 102(a) as being anticipated by Kubo (2003/0141769).

Kubo discloses a device manufacturing method and a lithographic apparatus comprising an actuating mechanism with a magnet assembly (101, 102) a coil arrangement (160) including a

plurality of coils (161, 162) separated from each other by a separation layer (154) of high thermal conductivity material parallel to the coil arrangement in substantial thermal contact with at least one cooling element (153), the actuator configured to position support structure and substrate holder (para 0060), a radiation system (Fig. 12), a support structure (1202) to support a patterning device (1201), a substrate holder (1206) to hold a substrate (1205), and a projection system (1204). Kubo also discloses separation element formed of steel (para 0063) and coolant fluid circulated through circular cooling channel (Fig. 1, para 0066).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo in view of Tamai et al. (Tamai) (2004/0032170).

Kubo discloses the claimed invention as discussed above; however, Kubo does not disclose separation layer perpendicular to the plane of coil arrangement. Tamai discloses in Fig. 9, separation layer perpendicular to the coil arrangement. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a separation layer perpendicular to the plane of coil arrangement as in Tamai to the invention of Kubo in order to keep the accuracy of the actuator by keeping it from undergoing thermal deformation as taught by Tamai in para 0027.

Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo in view of Aoyama et al. (Aoyama) (5,808,381).

Kubo discloses the claimed invention as discussed above; however, Kubo does not disclose the separation layer made of ceramic. Aoyama discloses coil support member made of ceramic. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the separation layer made of ceramic to the invention of Kubo in order to use material with excellent heat conductivity and insulation as taught by Aoyama in the abstract.

***Remarks***

Due to the rejection based on 35 USC 112, the previous art rejections are maintained.

In response to amendments to the claims, drawing objection is withdrawn.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter B. Kim whose telephone number is (571) 272-2120. The examiner can normally be reached on 8:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Peter B. Kim  
Primary Examiner  
Art Unit 2851

October 14, 2005